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(54) PHOTOCATALYTIC HYDROPHILIC MEMBER AND PHOTOCATALYTIC HYDROPHILIC COATING COMPOSITION

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a hydrophilic member the surface layer of which shows hydrophilicity in accordance with photoexcitation of a photocatalyst and has an excellent hydrophilicity even in a dark place by forming a brookite type titanium oxide particle-containing layer on a surface of a substrate.

SOLUTION: It is preferable to form a layer containing a brookite type titanium oxide particle and a silica or a layer containing a silicone in which at least a part of an organic group bonding to a silicon atom is substituted by a hydroxyl group. The brookite type titanium oxide particle is preferably of a plate shape. The plate has a surface area of 1-10,000 nm² and has a thickness of 0.5-10 nm. The brookite type titanium oxide particle of a plate shape is preferably oriented so that the surface of the plate is exposed on the surface of the layer. The thickness of the layer is preferably 1-200 nm. The surface of the layer preferably shows hydrophilicity in accordance with photoexcitation of a photocatalyst such that a contact angle with water becomes smaller than 20 degrees.

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